

# ReelTOOL

User Manual

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## Thank You for Purchasing ReelTOOL

ReelTOOL was created for View-Master Personal Camera owners. The ReelTOOL software allows you to easily convert your own View-Master compatible reels into popular stereo image file formats. Reels that you've made with your View-Master Personal Camera can now be digitally archived and shared with friends, family, and other 3D enthusiasts!

ReelTOOL makes it both fast and easy for you to digitally archive your View-Master Personal Reels! The software automatically extracts the stereo image pairs from your scanned reel images and saves them in any of several digital stereo image file formats. Doing this type of image extraction and conversion manually, without ReelTOOL, would be very time consuming and difficult.

ReelTOOL does **not** directly interface with scanners to perform scanning operations.

### **REGISTRATION AND TECHNICAL SUPPORT**

Please take the time to register. Registering qualifies you for technical support and lets us know how to contact you to notify you of corrections and updates. Your registration information will not be shared with third parties for marketing purposes.

There are five ways to register:

1. Purchasing ReelTOOL from ReelTOOL.com automatically registers you with the shipping information you provided during checkout.
2. Complete and mail the included registration card (if applicable).
3. Visit <http://www.ReelTOOL.com/Register.php>
4. Send your name, address, email address, place of purchase, and date of purchase in an email to [support@ReelTOOL.com](mailto:support@ReelTOOL.com). Specify "REGISTRATION" as the subject of the email.
5. Send your name, address, email address, place of purchase, and date of purchase to:  
GnotSoft  
ReelTOOL Software Registration  
PO Box 18921  
Spokane, WA. 99228

Please submit any technical support issues to [support@ReelTOOL.com](mailto:support@ReelTOOL.com).

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## **1. System Requirements**

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### **PC Hardware – Minimum Requirements**

CPU: Pentium 4 - 800MHz CPU or Equivalent AMD Processor  
MEMORY: 512MB RAM  
STORAGE: Hard Disk(s) with sufficient free space to store scanned reel images  
and converted output images  
SCANNER: 600 dpi (optical resolution) flatbed scanner featuring a 4”x5” transparency adapter

ReelTOOL performance benchmarks featuring various PC configurations are available on the ReelTOOL website (<http://www.ReelTOOL.com/>)

### **Operating System Requirements**

Microsoft Windows 98/2000/XP with the .NET Framework (v.1.1)

ReelTOOL requires the .NET Framework (v.1.1) to be installed. Later versions of .NET (v1.2, 2.0, etc) have not been tested but are expected to perform properly. If you should experience problems using ReelTOOL with a later version of .NET, please contact [support@reeltool.com](mailto:support@reeltool.com) for assistance.

The .NET Framework version 1.1 is available as a free download from the Microsoft website (<http://www.microsoft.com/>) to Licensed Microsoft Windows users.

## 2. ReelTOOL Features

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- Simple to use wizard Interface
- Single Image or Batch Mode operation
- Input file or Input folder selection dialogs (supporting BMP, JPG, PNG, and TIF input images)
- Output folder selection dialog
- Selectable output image size (includes an automatic option to choose the best image size for the reel image).
- Selectable stereo output formats. Any or all of the following stereo output formats can be chosen:
  - Anaglyph - Red/Cyan B&W
  - Anaglyph - Red/Cyan Color
  - Anaglyph - Red/Blue
  - Anaglyph - Red/Green
  - Cross-Eyed View
  - Parallel View
  - Column Interlaced
  - Row Interlaced
  - Individual Left and Right
- Selectable output image formats. Any or all of the following output image formats can be chosen:
  - BMP/BMS (BMS applicable to Cross-Eyed View only)
  - JPG/JPS (JPS applicable to Cross-Eyed View only)
  - PNG/PNS (PNS applicable to Cross-Eyed View only)
  - TIF
- ReelTOOL automatically locates the stereo image pairs and saves them in the selected output format(s).
- Errors are logged to a text file in the output directory reporting any errors encountered during the processing.
- Processing times are reported upon job completion.

### 3. Using ReelTOOL

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Use the wizard interface to select your scanned reel image(s) and desired output options. ReelTool will automatically save out the individual stereo pairs from the reel(s) in to any of the supported and chosen stereo image formats, file formats, and image sizes.

ReelTool will automatically locate and save out the stereo image pairs on the reel(s) without requiring the reel to be in a certain location, at a specific angle, etc. provided the reel is not damaged, the edges are not clipped from the image, and that it is scanned as a suitable dpi.

Although ReelTOOL may work with Commercial View-Master compatible Reels, the software is intended for owners of View-Master Personal Cameras and/or owners of Reels containing their own photographed images. ReelTOOL is not intended to process commercial reels. Please refer to the Software License agreement for additional information regarding its use restrictions.

View-Master is a registered trademark of Fisher-Price. ReelTOOL is a product of GnotSoft. Neither ReelTOOL or GnotSoft is affiliated with Fisher-Price.

## **4. Scanning Reels**

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### **Choosing the appropriate scanner**

The scanning of reels requires the use of a backlit scanner (one where the light shines from behind the image). Scanners having this capability are often referred to as featuring a transparency adapter. Please note that many scanners that support the scanning of transparencies are still limited in the size film they support. It's important to research whether a prospective scanner supports manually scanning 4"x5" transparencies in order to scan the entire reel without clipping the edges.

Selecting a scanner that supports higher optical resolutions (2400 dpi, 4800 dpi, etc) will allow for higher quality images. Remember the actual image frame is very small, and the more dots per inch (dpi), the finer the resolution of the scanned image. Using the scanner's native optical resolution is recommended over the use of interpolation methods.

### **Suggestions for Scanning**

- Reels should be scanned at 600-3200dpi; the greater the dpi, the greater the quality at larger image output sizes. 4800dpi may work, but has not been tested at this time. "Insufficient Memory" errors resulting from scanning higher dpi images are typically resolved by adding additional memory or increasing the PC's virtual memory settings and restarting Windows.
- Scanning at a desired optical resolution is preferred over scanning at the same interpolated resolution if you have a choice.
- Avoid cropping the edges of the reel in your reel scan. All edges of the reel should be visible in the resulting image for the software to work correctly.
- Avoid unnecessary white space surrounding the reel scan. Although the amount of white space that surrounds the reel in the scanned image doesn't matter to the program to work properly, it can reduce the maximum supported size of the output frame.
- Be sure to scan the correct side of your reels so that the images are not backwards. Place the back of the reel toward the scanner light source.
- Reel orientation (the angle that the reel is oriented in the input image) does not matter. The program will determine the reel orientation automatically. If it cannot, it assumes that the top of the scanned reel image is the top of the reel.
- Scanning with an unsharp filter can improve resultant image quality (subjective)
- Save scanned reel images in a BMP, JPG, PNG or TIF image file format.
- When using JPEG, a lossy format, specify Best Quality (100%) under the JPEG save options. This format, although lossy, works very well.
- When using TIF, select LZW or no compression to prevent problems with ReelTOOL not being able to understand the TIF image file. The TIF format can support a wide range of compressions including JPG, ZIP, and various FAX machine standards. ReelTOOL's TIF decoder may not understand all of these alternate compressions that can be embedded in the TIF. ReelTOOL does support LZW and non-compressed TIF images.

### **Warning:**

Some scanners will auto-crop and magnify; this can result in a scan result that is different than the area you specified and blurry images.

## 5. Image Resolutions

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ReelTOOL requires the input reel image to be a minimum of 2000x2000 dpi (the typical size of a 600dpi reel scan).

ReelTOOL has been fully tested for 600, 1200, 2400, and 3200 dpi images. Although a 4800 dpi image should work, no tests have been performed at this time. “Insufficient Memory” errors resulting from scanning higher dpi images are typically resolved by adding additional memory or increasing the PC’s virtual memory settings and restarting Windows.

To process a reel scanned at 600dpi, you must select the automatic image size (to render a 220x200 individual image or 440x200 cross-eyed, etc). Otherwise the available options will magnify the images.

600 dpi images typically support a raw image size of 220x200  
1200 dpi images typically support a raw image size of 550x500  
2400 dpi images typically support a raw image size of 990x900-1210x1100\*

\* depending on the amount of white space and allowed clipping of reel edges; reel image must be close to 9800 pixels across to output a resulting raw image size of 1210x1100.

Selecting an output image size beyond the raw image size will enlarge the picture and may result in visible signs of magnification when too large of output size is selected.

Images will be enlarged no more than 5% by the automatic option to try and fit the standard sizes (i.e. 548x498 image will bump to 550x500 because it's within the 5%)

## 6. Output File Naming Convention

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### Naming Convention Description

<u>Method</u>		<u>Output File Name</u>
Anaglyph Red/Cyan (B&W)	→	{original_reel_name}_P#_A_RCBW.{ext}
Anaglyph Red/Cyan (Color)	→	{original_reel_name}_P#_A_RCC.{ext}
Anaglyph Red/Blue (B&W)	→	{original_reel_name}_P#_A_RB.{ext}
Anaglyph Red/Green (B&W)	→	{original_reel_name}_P#_A_RG.{ext}
Cross-Eyed View	→	{original_reel_name}_P#_CE.{ext}
Column Interlaced	→	{original_reel_name}_P#_COL.{ext}
Individual Left/Right	→	{original_reel_name}_P#_L.{ext}
	→	{original_reel_name}_P#_R.{ext}
Parallel View	→	{original_reel_name}_P#_PAR.{ext}
ROW Interlaced	→	{original_reel_name}_P#_ROW.{ext}

Notes:

P# indicates Stereo Pair Number (1-7)

{ext} depends on particular image file format being output.

### Sorting Out your Output Images

The following example describes how to use the Search option in Microsoft Windows to re-organize your output files.

Example - Relocate all the Anaglyph Red/Cyan Color files from C:\temp to c:\ARCC:

1. Select Start Menu->Search->Search for Files/Folders
2. In the left Pane of "Search Results" specify:  
Search for files or folders named: \*\_A\_RB.\*  
Look In: Browse.. (to folder c:\temp)
3. Select "Search Now"
4. Select all the results in the right pane and use a right mouse click on the selected files to choose "Cut"
5. Open a Windows Explorer or My Computer and path to C:\ARCC (creating if necessary)
6. In the ARCC folder, right button paste. All the files with that naming convention will be relocated to the ARCC folder.

## 7. Appendix A: Improving Your Anaglyphs

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Remember that JPEG is a lossy format. Although the JPEG's output by ReelTOOL are "best" quality (versus smaller file size), a JPEG image may represent color channels in a way that could effect anaglyph images. Tip: Try comparing PNG and JPEG.

ReelTOOL produces a typical red/cyan color anaglyphs which consist of the red channel of the left image and the blue and green channels of the right image.

Image Pixel = Red:Left Green:Right Blue:Right

Often times the red shift can pull on the eyes and create visible ghosting.

Here's an example that describes how you can easily modify an existing anaglyph interactively using a program like Adobe Photoshop to improve it's appearance by reducing the amount of red-shift and aligning the most prominent edges:

1. Open an existing anaglyph image file in PhotoShop.
2. From the pull down menu select Windows->Show Channels (unless already visible).
3. On the Channels Dialog, click where it says "Red" The eyes indicating channel visibility will disappear from the Blue, Green, RGB and Alpha1 channels. You will only see an eye for the Red Channel and the row for the red channel will become highlighted. None of the others should be highlighted at this point. The picture will appear black and white.
4. Click the location where the eye would normally be seen for the RGB channel row. Now RGB, Red, Green, and Blue will display eyes indicating they are visible, and the image will again appear in color. Only the Red channel should still be highlighted.
5. Select the Move tool from the toolbox (looks like an arrow).
6. Click and drag the image to the right side of the screen and you'll see the red shift move as you do. Do this until you see the prominent edges of the image subject combine. Using 3D glasses, you can perfect the alignment to your satisfaction. This shift will typically result in a 10-50 pixel adjustment (horizontal) on a 550x500 image frame.
7. The process of shifting the image will leave the left-most side of the image needing to be removed. When finished adjusting the red-shift, click the RGB row of the channel list to resume editing the entire image.
8. From the pull down menu select Image->Canvas Size..
9. Set the Width to equal the Height, and specify the middle right position as the anchor point.

Notes:

Vertical alignment can also be done if desired, requiring the canvas size to crop a vertical edge also.

The anaglyphs that ReelTOOL produces are valid base anaglyphs. Creating the "perfect anaglyph" often calls for one-on-one involvement.

## **8. Appendix B: Revision History**

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No changes since initial release.